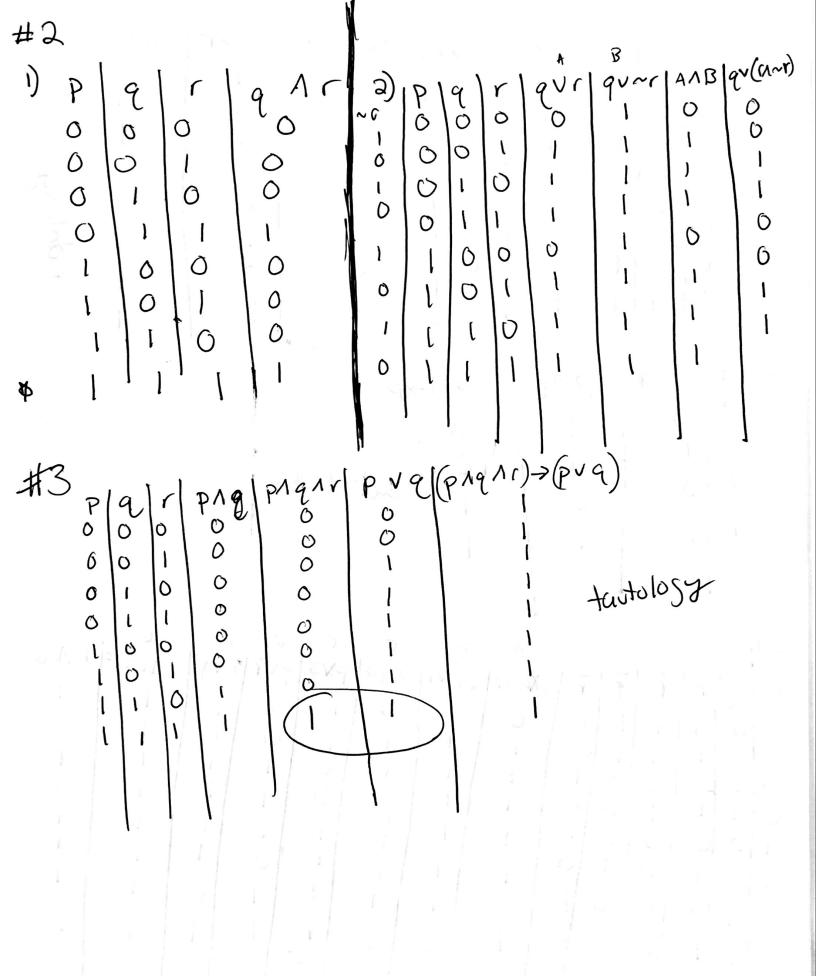
Amabel Consilvio 1. Formal Proofs 1. P "Assume" 11 11 2 P79 n 11 3 p + 1 a, MP 3, MP 4,5, Conjunction 6 9 M 7 p > 9 1 "Assume" #21 p > q V r 2p > 9 v~r 3 P yranne I, MT 4. 9 V C 3,MT 5 qv~r 4,5, conjunction 6 (qvr) 1 (qv~r) 6, distributive 7 qv(r/~r) 7, negation 8 9 VF 8, identity

W p → 9

P > 9 | 9 > 1 (P > 9) 1 (9 > 1) | P > 1 A≯B 0 0 Q 0 Q 0 (p > 9) -> p satisfichle F C D E 6 ANB PVE PVF I VP CADVE FAG #4 | PXYQV ( | FVQVT 0 0 0 0  $\Diamond$ 0 0 0 0 ٥ 0 0 0 tastology



TY

 $PV(q\Lambda \sim (r\Lambda(s \Rightarrow t)))$   $s \Rightarrow t = (s \neq \Lambda t) \vee \Lambda \neq S$   $PV(q\Lambda \sim (r\Lambda(Cs \neq \Lambda t) \neq N \sim S))$   $PV(q\Lambda ((r\Lambda) \vee (\Lambda ((s \neq \Lambda t) \vee \Lambda S)))$   $PV(q\Lambda ((r\Lambda) \vee (\Lambda ((s \neq \Lambda t) \vee \Lambda S)))$   $PV(q\Lambda ((r\Lambda) \vee (\Lambda ((s \neq \Lambda t) \wedge \Lambda S)))$ 

| P ν (q Λ ((~r) ν ((~s) (~t)) Λ s)))

demorgans

demorgans/ double
negative

demorgans

≠ p=1, any therefore anything else will be true be request p is ord wit the rest of the statement.